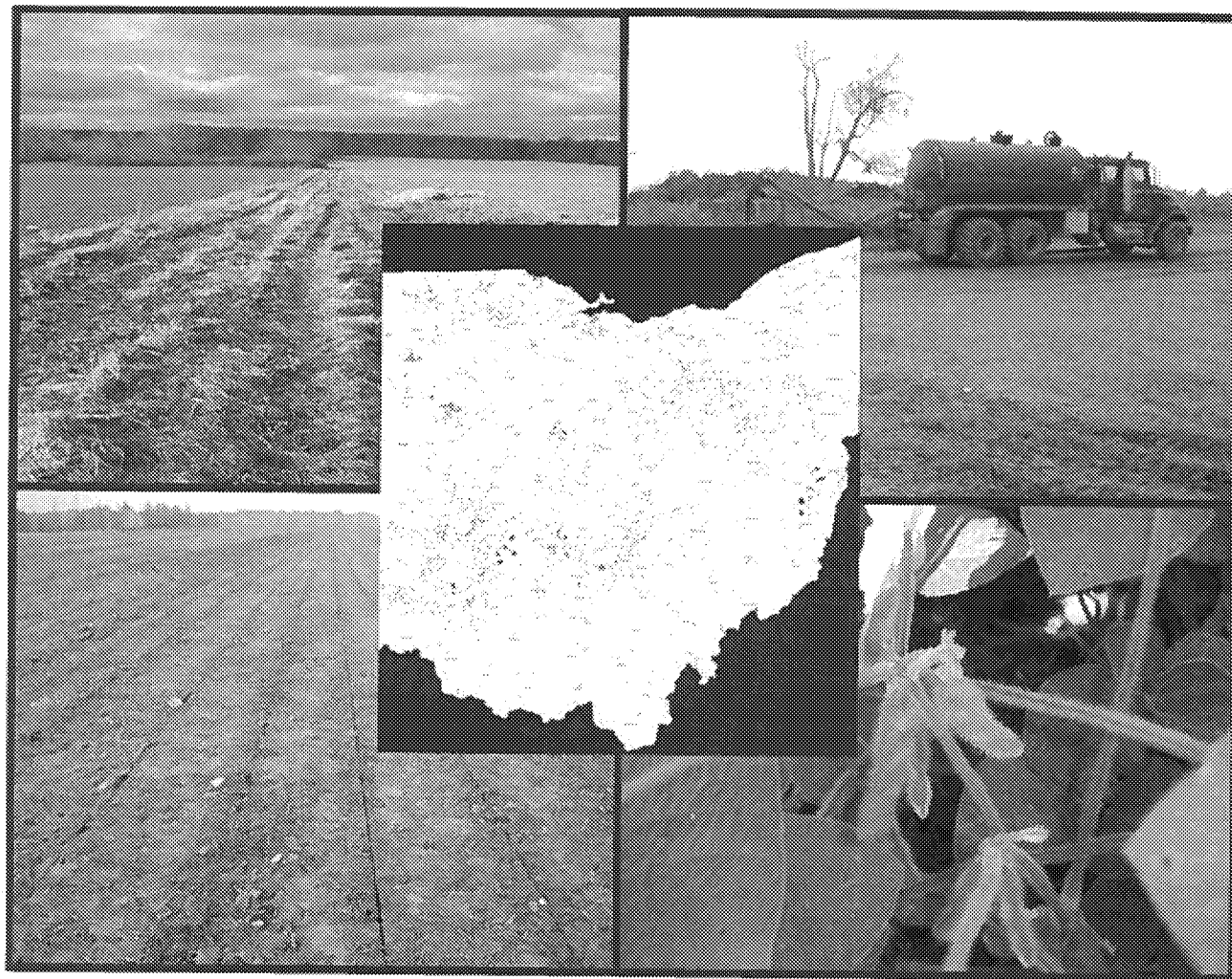


Application for Authorization: Class B Biosolids Beneficial Use Sites



Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Biosolids Treatment Works Information

Treatment works name: Emerald BioEnergy		
Ohio NPDES permit #: 4IN00204*AD	County: Morrow	
Mailing address: 461 State Route 61		
City: Marengo	State: OH	Zip: 43334
Operator of record: Taylor Faecher		
Telephone number: (419) 253-5300		
Email address: tfaecher@renergy.com		

Certification Statement

1. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
2. I have read and understand Chapter 3745-40 of the Ohio Administrative Code (OAC) and I agree to beneficially use biosolids in accordance with all applicable beneficial use requirements and restrictions established in Chapter 3745-40 of the Ohio Administrative Code.
3. I agree to only beneficially use biosolids that have satisfied a pathogen reduction alternative and a vector attraction reduction option and have metals concentration below the pollutant ceiling concentrations as established in Chapter 3745-40 of the Ohio Administrative Code.
4. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.


Signature

2 / 12 / 18
Date

This form shall be signed by the operator of record for the treatment works, be an original signature, not a copy, and must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Owner Consent for Beneficial Use

Exemption 6

Certification Statement

1. I agree to allow biosolids generated by the treatment plant identified on Form BUA-1 to be beneficially used on my property at agronomic rates.
2. I agree to allow federal, state and local regulatory staff access to the beneficial use site for the purposes of inspecting and authorizing the beneficial use site, beneficially using biosolids, and collecting and analyzing samples from the beneficial use site. I reserve the right to ask the above parties for proper identification at any time.
3. I certify that I am holder of legal title to the property described on application form BUA-5, or am authorized by the holder to give consent for the land application of biosolids, and that there are no restrictions to the granting of consent under this form.

Exemption 6

7 / 7 / 2018
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

¹ For purposes of this form, "beneficial use site owner" means the person who owns the legal rights to the proposed beneficial use site.

² In the event the owner of the beneficial use site changes, Form BUA-2 must be revised and resubmitted to Ohio EPA.

Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Beneficial Use Site Operator Consent for Beneficial Use

Exemption 6

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745~~40~~ of the Ohio Administrative Code.

Exemption 6

7 / 7 / 2018
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

¹ For purposes of this form, "beneficial use site operator" means the person who plants, grows, harvests or otherwise manages feed crops, fiber crops, food crops or pasture land on the proposed beneficial use site.

² In the event the operator of the beneficial use site changes, Form BUA-3 must be revised and resubmitted to Ohio EPA.

Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Beneficial User Information

Beneficial user ¹ : Emerald BioEnergy		
Contact person: Taylor Faecher		
Mailing address: 461 State Route 61		
City: Marengo	State: OH	Zip: 43334
Telephone number: (419) 253-5300		
Email address: tfaecher@reenergy.com		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.



Signature²

2 / 12 / 18

Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

¹ For purposes of this form, the beneficial user means the person who sprays or spreads Class B biosolids onto the surface of the beneficial use site, injects below the surface of the beneficial use site, or incorporates into the soil of the beneficial use site, for the purpose of providing an agronomic benefit.

² In the event the beneficial user of the beneficial use site changes, Form BUA-4 must be revised and resubmitted to Ohio EPA.

Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Beneficial Use Site Information

Ohio EPA Site I.D. (Ohio EPA Use Only)

Field site I.D.: MOS-03-12																															
Beneficial use site location: West of Co Rd 165 and south of Co Rd 159																															
County: Morrow		Township:																													
Latitude: 40.43215		Longitude: -82.91019																													
Total acreage proposed for beneficial use: 27																															
Type of beneficial use to be performed: Surface application <input checked="" type="checkbox"/> Injection or immediate incorporation <input checked="" type="checkbox"/>		Ground slope percent: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Less than 15%</td> <td style="text-align: center; width: 20px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">15% to 19.9%</td> <td style="text-align: center; width: 20px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Greater than 20%</td> <td style="text-align: center;"><input type="checkbox"/></td> <td colspan="2"></td> </tr> </table>		Less than 15%	<input checked="" type="checkbox"/>	15% to 19.9%	<input type="checkbox"/>	Greater than 20%	<input type="checkbox"/>																						
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Greater than 20%	<input type="checkbox"/>																														
Soil pH (s.u): 6.6		Soil phosphorus (mg/kg): 24																													
Bedrock depth (feet): 2.82 feet		Bray Kurtz P1 <input type="checkbox"/> Mehlich 3 <input checked="" type="checkbox"/>																													
Type of crops to be grown: <table border="1" style="float: right; margin-top: 10px; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">Crop Type</th> <th style="padding: 2px;">Expected Yield</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">Corn</td> <td style="text-align: center; padding: 2px;">1 5 0</td> </tr> <tr> <td style="padding: 2px;">Soybeans</td> <td style="text-align: center; padding: 2px;">5 0</td> </tr> <tr> <td style="padding: 2px;">Wheat</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Pasture</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Hay</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Other:</td> <td style="padding: 2px;"></td> </tr> </tbody> </table>				Crop Type	Expected Yield	Corn	1 5 0	Soybeans	5 0	Wheat		Pasture		Hay		Other:															
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Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Applicable isolation distances:

Type of Isolation Distance			
Surface waters of the state	<input checked="" type="checkbox"/>	Sinkhole/UIC class V drainage	<input type="checkbox"/>
Occupied building	<input checked="" type="checkbox"/>	Private potable water source	<input checked="" type="checkbox"/>
Medical care facility	<input type="checkbox"/>		

Are any endangered species or endangered species habitats located on the beneficial use site?

☐ Yes ☒ No

If "Yes" is marked, list the types of endangered species or endangered species habitat:

--

Have biosolids been beneficially used on the site since July 20, 1993?

☐ Yes ☒ No

If "Yes" is marked, list the biosolids generators and years beneficial use occurred:

Generator	NPDES permit No.	Year of Beneficial Use

The application must also include all of the following:

- ☐ A soil map of the proposed beneficial use site;
- ☐ A frequency flood class map of the proposed beneficial use site;
- ☐ An aerial map of the proposed beneficial use site that clearly identifies the entrance of the beneficial use site from the nearest road and all applicable isolation distances as established in Chapter 3745-40 of the Ohio Administrative Code;
- ☐ A vicinity road map at or near the township level that clearly identifies the proposed beneficial use site with all roads labeled; and
- ☐ A copy of the most recent soil test results identified in this form.

0-11-04

159

Ron Ruggles Farm

159

165

159

162

MOQ-03-03

00-03-02

MOQ-11-0

MDS-03-12 Needs Permit

165

21

23

162

21

165

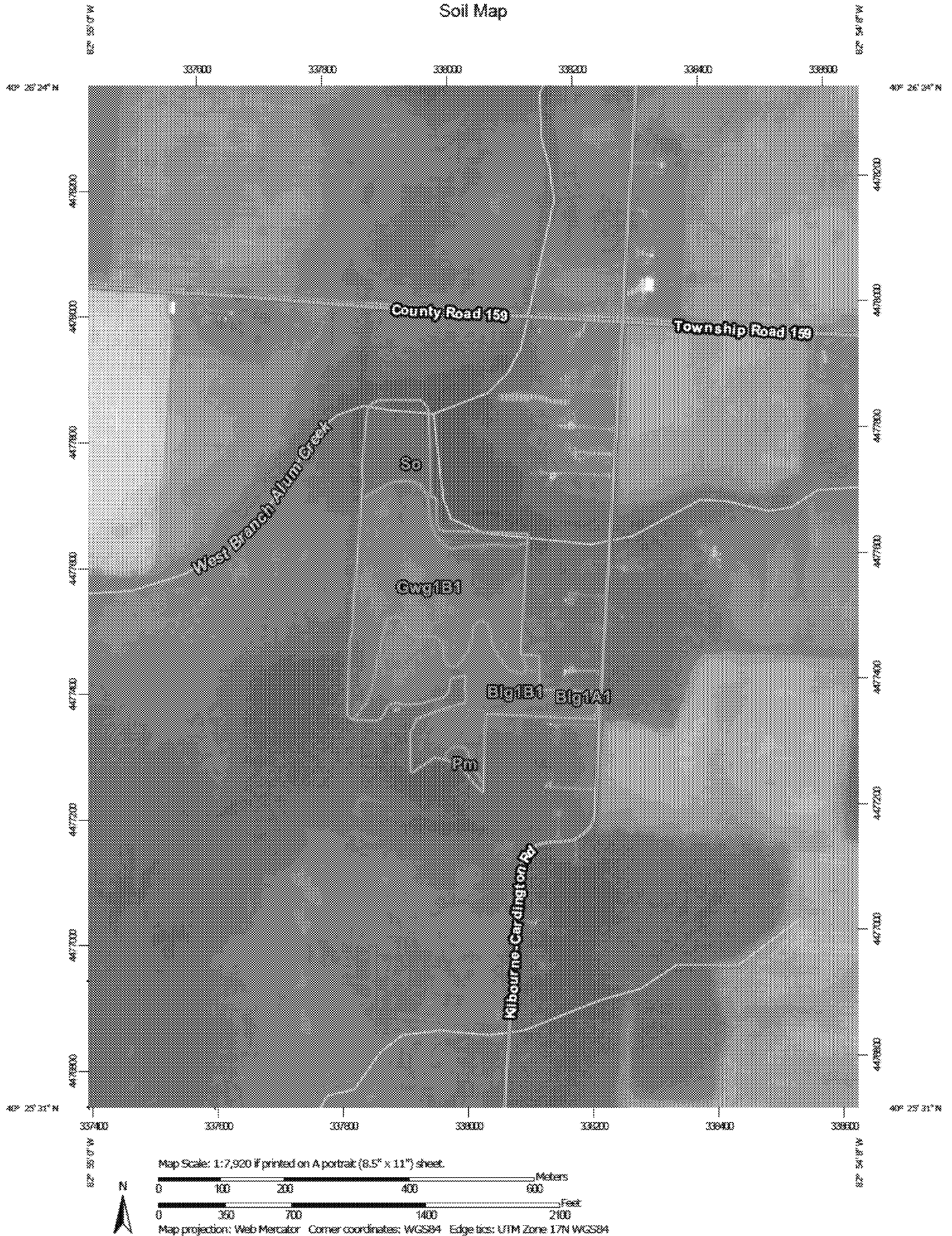
MOS-03-12 Setback Distance



0 0.05 0.1 0.2 Miles

Setback Distance	
MOS-03-12	
Total Area: 28.84 acres	
Setbacks:	
Residence - 300' Buffer	2.56 acres
Residence - 100' Buffer	0.04 acres
Surface Waters - 33' Buffer	0.87 acres
Total Setback Area:	3.47 acres

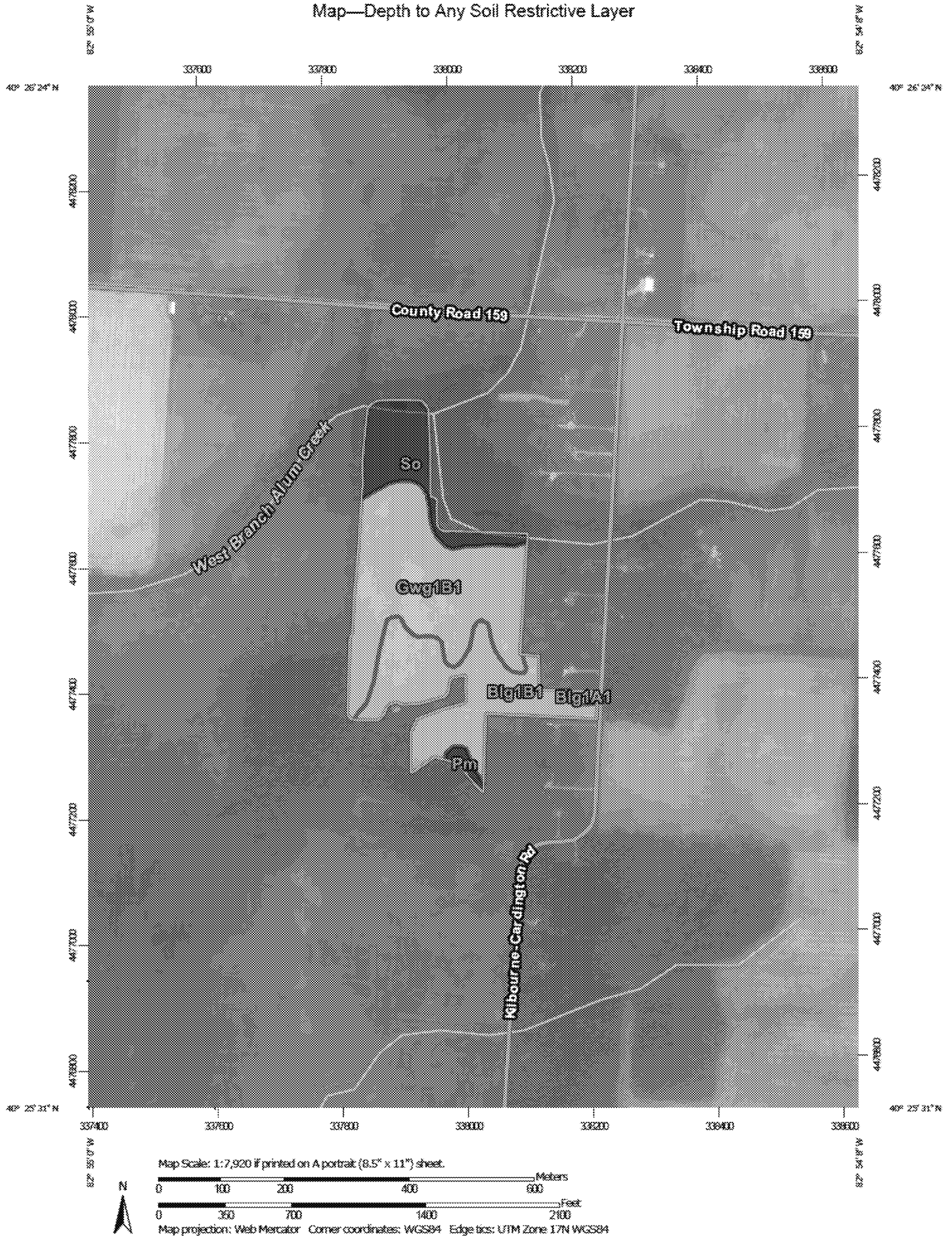
Soil Map



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	0.2	0.9%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	9.6	33.2%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	14.2	49.1%
Pm	Pewamo silty clay loam, 0 to 1 percent slopes	0.4	1.3%
So	Sloan silty clay loam, sandy substratum, occasionally flooded	4.5	15.5%
Totals for Area of Interest		28.8	100.0%

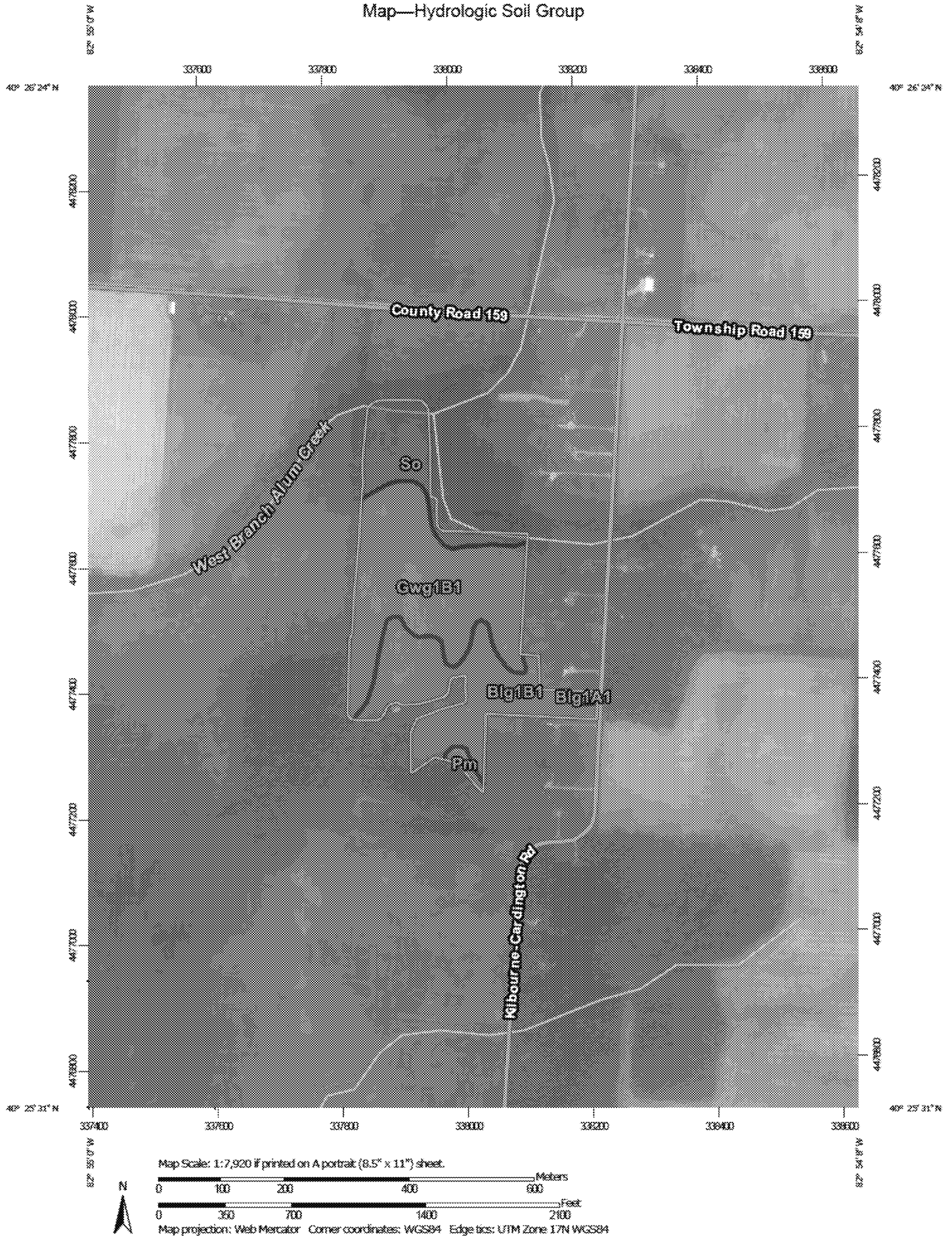
Map—Depth to Any Soil Restrictive Layer



Table—Depth to Any Soil Restrictive Layer

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	99	0.2	0.9%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	94	9.6	33.2%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	86	14.2	49.1%
Pm	Pewamo silty clay loam, 0 to 1 percent slopes	>200	0.4	1.3%
So	Sloan silty clay loam, sandy substratum, occasionally flooded	>200	4.5	15.5%
Totals for Area of Interest			28.8	100.0%

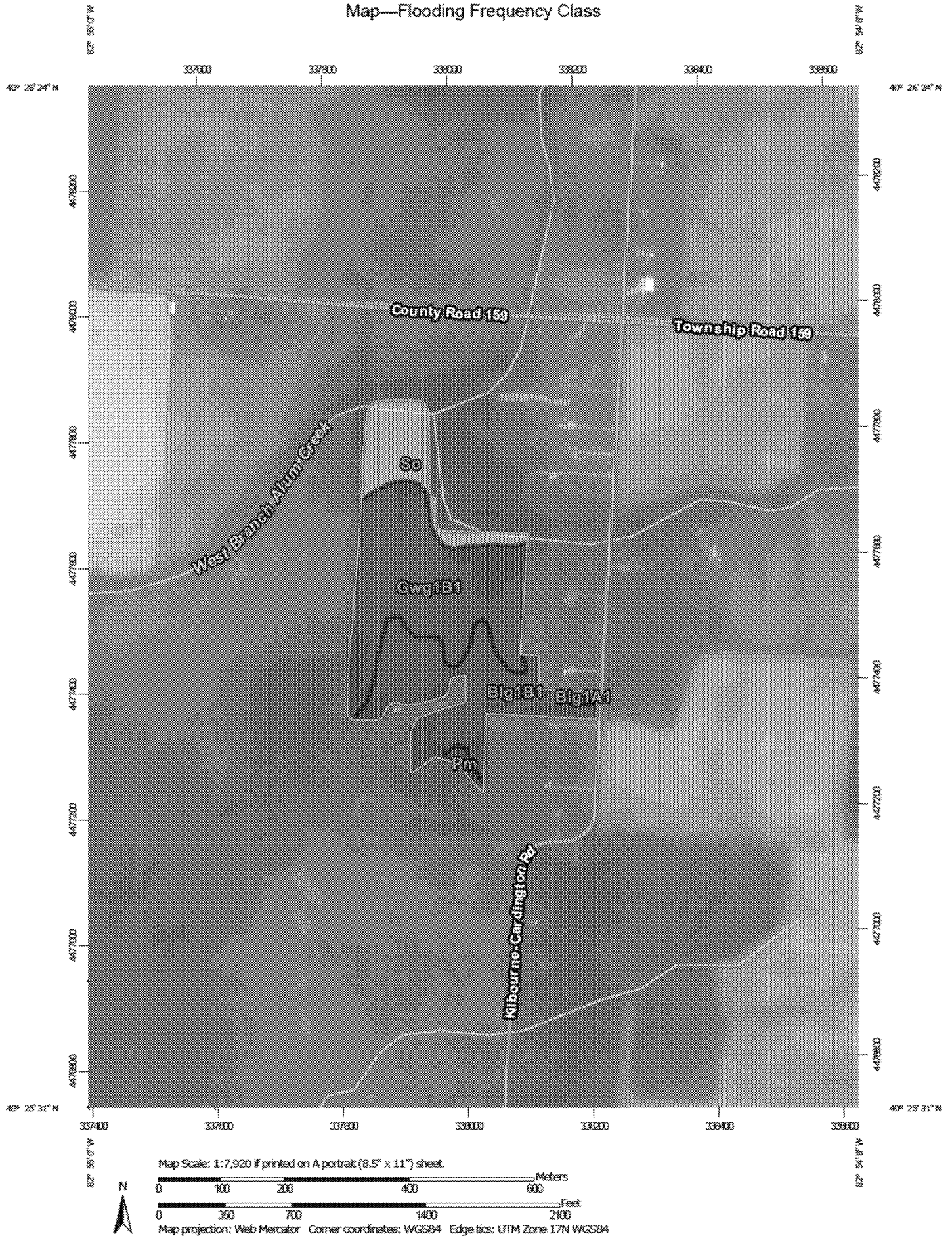
Map—Hydrologic Soil Group



Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.2	0.9%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	9.6	33.2%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	14.2	49.1%
Pm	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.4	1.3%
So	Sloan silty clay loam, sandy substratum, occasionally flooded	B/D	4.5	15.5%
Totals for Area of Interest			28.8	100.0%

Map—Flooding Frequency Class



Table—Flooding Frequency Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	None	0.2	0.9%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	None	9.6	33.2%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	None	14.2	49.1%
Pm	Pewamo silty clay loam, 0 to 1 percent slopes	None	0.4	1.3%
So	Sloan silty clay loam, sandy substratum, occasionally flooded	Occasional	4.5	15.5%
Totals for Area of Interest			28.8	100.0%

1b/A

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

58251-30

Name Renergy, Inc. City Cardington State OHIndependent Consultant Brookside Consultants of Ohio, Inc. Date 07/13/2018

Sample Location <u>MOS-03-12</u>		1				
Sample Identification						
Lab Number		0632-1				
Total Exchange Capacity (ME/100 g)		13.04				
pH (H ₂ O 1:1)		6.6				
Organic Matter (360°C LOI) %		3.20				
Estimated Nitrogen Release lb/A		82				
ANIONS	SOLUBLE SULFUR* ppm		10			
	PHOSPHORUS	MEHLICH III lb/A P as P ₂ O ₅	110			
		ppm of P	24			
		BRAY II lb/A P as P ₂ O ₅				
		ppm of P				
	OLSEN lb/A P as P ₂ O ₅					
	ppm of P					
EXCHANGEABLE CATIONS	CALCIUM* lb/A		3444			
	ppm		1722			
	MAGNESIUM* lb/A		602			
	ppm		301			
	POTASSIUM* lb/A		302			
	ppm		151			
	SODIUM* lb/A		60			
	ppm		30			
BASE SATURATION PERCENT						
	Calcium %	66.03				
	Magnesium %	19.24				
	Potassium %	2.97				
	Sodium %	1.00				
	Other Bases %	4.80				
	Hydrogen %	6.00				
EXTRACTABLE MINORS						
	Boron* (ppm)	0.55				
	Iron* (ppm)	171				
	Manganese* (ppm)	26				
	Copper* (ppm)	2.19				
	Zinc* (ppm)	1.38				
	Aluminum* (ppm)	512				
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	Bray I P (ppm)		19			

* Mehlich III Extractable

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